



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/697,803  | 10/31/2003  | Young-Chol Lee       | Q77428              | 1161             |
| 23373   | 7590        | 08/09/2005           | EXAMINER            |                  |
| SUGHRUE MION, PLLC<br>2100 PENNSYLVANIA AVENUE, N.W.<br>SUITE 800<br>WASHINGTON, DC 20037 |             |                      | SEVER, ANDREW T     |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2851                |                  |

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/697,803

Applicant(s)

LEE ET AL.

Examiner

Andrew T. Sever

Art Unit

2851

AM

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
  - 4a) Of the above claim(s) 12,13 and 16-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11,14 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
  - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) ☒ All b) ☐ Some \* c) ☐ None of:
      - 1. ☒ Certified copies of the priority documents have been received.
      - 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 12, 13, and 16-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 1/13/2005.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2851

4. Claims 1-3, 11, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naum (US 6,272,269) in view of Kaelin et al. (US 6,435,682.)

Naum teaches in figure 9 a projection display comprising:

An illumination module; and

A slide (92) with image data on it,

Wherein the illumination module comprises:

A light source comprising a plurality of light emitting devices (66);

A light guide panel (44) comprising a top surface from which light is emitted (exit portion that lights the slide), the top surface facing the slide, and an edge surface on which light is incident, the light guide panel having a rectangular cross section (clearly part 44 has a rectangular cross section in the cross sectional view shown in figure 9); and

An optical transport member (26 and 28) for guiding light emitted from the light source to the edge surface of the light guide panel, the cross sectional area of the optical transport member parallel to the edge surface increasing from the edge surface to the light source.

Naum teaches a slide instead of an optical modulator. Kaelin teaches in column 4 lines 15-26 that optical modulators (spatial light modulator) are interchangeable with slides, being better for active images and/or more complex still images. Accordingly it would have been obvious to one of ordinary skill in the art to replace the slides of Naum with a spatial light modulator, which allows for more complex still images and/or active images.

*With regards to applicant's claim 2:*

The optical transport member of Naum (26 and 28) comprises a light emitting portion facing the edge surface (the portion at 30 that connects to the light guide), a light incident portion facing the light source (light sources 66 face the opening of the transport member nearly 26), wherein the optical transport member is transparent. (See column 6 lines 21-23 which teaches the optical transport member is made of fused silica. Fused silica is a transparent material.)

*With regards to applicant's claim 3:*

See figure 9, which clearly shows the light reflecting off the surfaces of the body portion.

*With regards to applicant's claim 11:*

Naum teaches in column 6 lines 31-50 that the index of the optical transport member is about 1.5 and made of fused silica which is a common material that waveguides (fiber optics) being the standard (see US 2003/0107739 to Lehmann et al. paragraph 60.)

*With regards to applicant's claims 14 and 15:*

Naum teaches light emitting device arrays which are LEDs (light emitting diodes.) (See column 8 lines 14-33.)

Art Unit: 2851

5. Claim 4, 5, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naum in view of Kaelin as applied to claims 1-3, 11, 14, and 15 above, and further in view of Okuyama et al. (US 6,814,442.)

As described in more detail above Naum in view of Kaelin teaches a projection display which among other things includes a body portion. Naum in view of Kaelin, however, does not teach that this body portion comprises a plurality of stair portions. Such a body portion is taught by Okuyama in figures 1 and 2 part K. Okuyama teaches in column 4 lines 36-55 that the structure of this body portion allows for more effective/efficient use of the light. Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to include stair portion in the body portion of Naum in view of Kaelin as taught by Okuyama.

*With regards to applicant's claim 5:*

It is clear from inspection of figures 1 and 2 of Okuyama that the second and first surfaces are orthogonal to each other.

*With regards to applicant's claims 9 and 10*

See the with regards to claim 5 as well as the rejection of Naum in view of Kaelin's with regards to claims 14 and 15

Art Unit: 2851

6. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naum in view of Kaelin as applied to claims 1-3, 11, 14, and 15 above, and further in view of Hooker et al. (US 6,554,463.)

As described in more detail above Naum in view of Kaelin teaches a projection display that among other things includes optical transport member having at least one light incident portion. Naum in view of Kaelin does not teach multiple light incident portions, however Hooker provides such a teaching in figure 1. Hooker teaches in column 3 lines 47-57 that by using individual light incident portions for each LED, less or no light is lost to the surrounding atmosphere making the optical transport/light source combination more efficient. Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the multiple light incident portions of Hooker in the projection display of Naum in view of Kaelin.

*With regards to applicant's claims 7 and 8:*

Both Naum in view of Kaelin and Hooker teach the use of multiple LEDs.

*Response to Arguments*

7. Applicant's arguments filed 6/3/2005 have been fully considered but they are not persuasive.

Applicant argues that the light guide panel (44) is not rectangular and not a light guide panel. With regards to the first argument that it is not rectangular, applicant's claimed limitation is that it has a "rectangular cross section", since a cross section is what is shown in the figure 9 and part 44 is drawn as a rectangle; the light guide (44) is clearly rectangular. With regards to the second argument that it is not a light guide panel, applicant is directed towards MPEP 2111, which states claims must be given their broadest reasonable interpretation and in MPEP 2111.01 it is stated "During examination the claims must be interpreted as broadly as their terms reasonably allow." In the present case the term "light guide panel" is broadly being construed to comprise of a panel, which guides light. Naum's part 44 can be considered a panel and it guides light from part 30 of the optical transport member to the fiber optic coupling 46, therefore it is a light guide panel, it is irrelevant what Naum calls it as each applicant is entitled to be their own lexicographer. Accordingly applicant's arguments are considered non-persuasive and the rejection has been repeated (with a small alteration to reflect applicant's amended claim language) and made final.

Applicant further argued that the rejection of claim 2 was not clear. Although it was clear from the figures which parts of the transport member faces the light source and



Art Unit: 2851

which part faces the light guide, the rejection of claim 2 has been modified to explicitly label those parts, as for the transparent material, it was already cited in the previous office action. Since no change has been made in the grounds of rejection of claim 2, it is made final.

All other arguments were based on Naum not meeting the limitations of claim 1 of which the other claims are dependent on. As shown above this argument was non-persuasive and the rejections of all other claims have been repeated and made final.

### *Conclusion*

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

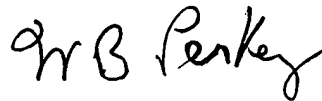
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2851

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**William Perkey**  
**Primary Examiner**

AS